

## ROUTING AND RECORD SHEET

SUBJECT: (Optional) GAO Report #GAO/GGD-85-30 26 Feb 85 "Benefit Levels of Retirement: Nonfederal Retirement Programs

FROM  Liaison Division  
Office of Legislative Liaison

EXTENSION

NO

000 85-0759

DATE

5 March 1985

TO: (Officer designation, room number, and building)

DATE

OFFICER'S INITIALS

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REPORT BY THE U.S.

# General Accounting Office

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## Benefit Levels Of Nonfederal Retirement Programs

This report estimates the levels of benefits available from nonfederal retirement programs using selected studies and data bases. Social security, pension plan, and capital accumulation plan benefits are shown for different categories of age and years of service and at varying final salary levels. The purpose of the report is to assist the Congress in its efforts to design a new retirement program for federal employees covered by social security.



GAO/GGD-85-30  
FEBRUARY 26, 1985



**UNITED STATES GENERAL ACCOUNTING OFFICE**  
**WASHINGTON, D.C. 20548**

**GENERAL GOVERNMENT  
DIVISION**

B-214421

The Honorable William V. Roth, Jr.  
Chairman, Committee on Governmental Affairs  
United States Senate

The Honorable Ted Stevens  
Chairman, Subcommittee on Civil Service,  
Post Office, and General Services  
Committee on Governmental Affairs  
United States Senate

The Honorable Thomas F. Eagleton  
Ranking Minority Member  
Committee on Governmental Affairs  
United States Senate

The Honorable Jeff Bingaman  
Ranking Minority Member  
Subcommittee on Civil Service,  
Post Office, and General Services  
Committee on Governmental Affairs  
United States Senate

This is our second report prepared in response to your joint request of August 5, 1983, which asked for information on retirement programs in the nonfederal sector. Our earlier report, entitled Features of Nonfederal Retirement Programs (GAO/OCG-84-2, June 26, 1984), depicted the prevailing features of nonfederal retirement programs as shown by selected studies and/or data bases. This report supplements that effort by estimating the levels of benefits at retirement that selected nonfederal programs provide to employees at various ages, years of service, and salary levels. It uses the same six data sources as used in our earlier report. (See pp. 1 and 2 of appendix I for a description of them.) Post-retirement adjustments are addressed in our earlier report. We did not assess survivor benefit or tax issues in our analysis nor make comparisons with benefit levels of the civil service retirement system.

The details of our analysis are included in appendix I to this letter, along with a description of the sources and methodology we used in making the analysis.

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Benefit formulas vary considerably among nonfederal pension plans. Not only do the benefit accrual rates differ, but the approaches to recognizing social security benefits and the early retirement reduction provisions differ from plan to plan. Thus, we could not identify one formula as being representative of all plans. Instead, we calculated the benefit amounts produced by the formulas as a percentage of final salary. In this manner, the average benefit levels provided by the plans in each study could be determined.

Several observations can be made from our work that the Congress should find useful in designing the new retirement program to supplement social security benefits for federal employees hired after December 31, 1983.

- There was little difference in the average pension plan benefits available to retirees at age 65 and age 62 when years of service and salary levels were equal.
- Private sector pension plan benefits for employees retiring at age 55 with 30 years of service ranged from 72 to 84 percent of the benefits they would have received if they had been age 62 with the same years of service and salary levels. This reflects the fact that most plans reduce accrued benefit amounts when employees retire at age 55. Similarly, in state government pension plans, the age 55 benefits were, on the average, 85 percent of the benefit amounts at age 62, with the same years of service and salary levels.
- State government pension plans provided higher average benefits than private sector pension plans at virtually all ages, years of service, and salary levels.
- The capital accumulation plan component of a typical private sector retirement program can add substantial amounts of retirement benefits to participating employees. The most common of these, a thrift plan, generally provides for a 50 percent employer match of employee contributions of up to 6 percent of pay. A 30-year career employee who contributes to the plan during that entire period at just one-half the 6 percent rate and earning 7.5 percent interest can supplement his/her pension and social security benefits by 16 percent or more of final annual salary. States generally did not match employee contributions in their plans, therefore, we did not calculate any thrift plan benefits for them. Thus, combined benefits for state employees were less than those received by private sector employees who participate in thrift plans.

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The following chart illustrates the average benefit levels in the nonfederal retirement programs we studied for employees retiring on January 1, 1983.<sup>1</sup> The levels depict the average rates as a percent of a \$30,000 final salary (which is approximately the average preretirement salary of federal employees) for individuals retiring with 30 years of service (approximate average career length) at ages 65, 62, and 55 (ages when full or partial social security benefits are available and earliest age when pension benefits are generally available). The benefits are those available from pension plans, social security, and thrift plans. The thrift plan amounts assume the employee contributed 3 percent of pay during all working years with a 50-percent matching contribution by the employer and interest earnings of 7.5 percent a year. This illustration assumes employee contributions of 3 percent of pay since studies have shown that employees often contribute less than the maximum amount allowed by the plan for employer matching.

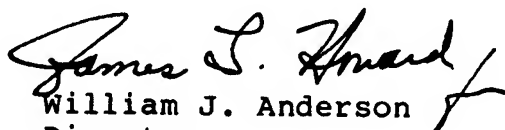
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<sup>1</sup>This date was used because the pension data bases were for 1982, the most current data at the time of our review.

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<u>Benefits As A Percent Of Final Salary Of \$30,000</u>						
<u>Sources</u>	<u>Age 65 and 30 years' service</u>		<u>Age 62 and 30 years' service</u>		<u>Age 55 and 30 years' service</u>	
	<u>Pension plan</u>	<u>Total benefits</u>	<u>Pension plan</u>	<u>Total benefits</u>	<u>Pension plan</u>	<u>Total benefits*</u>
Bureau of Labor Statistics	31.3	79.2	29.3	68.5	21.6	37.6
Bankers Trust	31.2	79.1	30.5	69.7	23.4	39.4
Hay	34.7	82.6	32.9	72.1	24.5	40.5
Hewitt	32.6	80.5	31.5	70.7	22.9	38.9
Wyatt	33.8	81.7	34.1	73.3	27.9	43.9
State**	43.5	71.7	42.3	63.2	36.1	36.1
*Does not include social security benefits of 19.4 percent which are available at age 62.						
**Does not include thrift plan benefits.						

As requested by your offices, we did not obtain comments on this report. As arranged with your offices, copies are being sent to the Office of Management and Budget, the Office of Personnel Management, and other interested parties.

  
William J. Anderson  
Director

## APPENDIX I

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BENEFIT LEVELS OF  
NONFEDERAL RETIREMENT PROGRAMS

OBJECTIVE, SCOPE, AND METHODOLOGY

The objective of this review was to estimate the average benefit amounts that selected nonfederal retirement programs would provide to employees at various ages, years of service, and salary levels. The purpose of our work was to assist the Congress in designing a new retirement program for federal employees who were covered by social security on January 1, 1984.

The sources we used in our analyses were:

- Department of Labor's Bureau of Labor Statistics (BLS), Employee Benefits in Medium and Large Firms and the data bases supporting the report. This report is prepared annually by BLS on the basis of its analysis of retirement and other benefit programs in the private sector establishments used in the federal pay comparability process for salaried employees. Therefore, it is not necessarily representative of the entire private sector. We used the 1982 report which covered a survey universe of about 21 million employees, of whom an estimated 84 percent, or 17 million employees, participated in pension plans. A total of 976 pension plans was included in the BLS survey. The BLS survey universe included establishments employing as few as 50, 100, or 250 full-time employees, depending on the industry surveyed.
- The Bankers Trust Company, Corporate Pension Plan Study--A Guide for the 1980s. This study included 325 retirement plans in 240 companies, of which the Bankers Trust Company characterized 216 as "large" and 24 as "small." Retirement plans in the 240 companies covered 8.2 million employees.
- Hay Associates, 1983 Hay-Huggins Noncash Compensation Comparison. This study included 781 private sector retirement plans. The study report did not indicate the number of employees covered by the plans, but Hay Associates representatives said that about one-third of the plans surveyed covered 1,000 or fewer employees.
- Hewitt Associates, Salaried Employee Benefits Provided by Major U.S. Employers in 1982. This report covered 678 private sector retirement plans. The report identified the companies involved but gave no information on the number of employees in the plans.

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--The Wyatt Company, A Survey of Retirement, Thrift, and Profit-Sharing Plans Covering Salaried Employees of 50 Large U.S. Industrial Companies as of January 1, 1983. The report did not contain information on the number of employees in the plans.

--The National Association of State Retirement Plan Administrators, September 30, 1982, Survey of State Retirement Systems. This survey included all states. We used the survey data on general employees (about 2.5 million state employees and about 1.1 million local government employees who participate in the various state plans) and did not use the survey data on other employees such as police, firefighters, and teachers who are covered by special provisions.

We used these same sources in preparing our earlier report--Features of Nonfederal Retirement Programs (GAO/OCG-84-2, June 26, 1984). The studies focused on retirement programs for salaried employees. Since all the studies did not identify their survey participants, we could not determine the extent to which duplication in participant coverage might exist. Also, we did not verify the accuracy of the data. The studies were not designed to be statistically representative of all nonfederal retirement programs. However, their scope, ranging from companies with as few as 50 employees to those with over 100,000 employees, and the similarities of features in the private sector plans included in the studies make them an acceptable data base for depicting benefits available in the nonfederal sector.

As discussed in our earlier report, the data sources showed that retirement programs in the nonfederal sector typically consisted of three parts--social security, a pension plan, and capital accumulation plans.

Social security covers most employment in the United States. It is based on the principle that the workers of the nation should be assured that a basic level of family income will continue when earnings are impaired by disability, old age, or death. Its benefit formula provides wage-related benefits, but replacement rates (the ratio of benefits to earnings) are greater for low-wage earners than for high-wage earners.

Social security is financed by a payroll tax levied on covered workers and their employers. In 1985, workers will contribute 5.7 percent of their first \$39,600 of wages (the "maximum covered earnings"), and a matching amount will be paid by their employers.



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Employer pension plans generally use social security as a base and provide supplementary benefits that are tailored to the special circumstances of the covered group. Most salaried employees are in pension plans which consider such factors as salary level, age, and years of service to compute benefit amounts.

A pension plan is integrated with social security to the extent that it recognizes social security in establishing benefit levels. Because social security benefits as a percent of salary decrease as income levels increase, integrated plans attempt to compensate for this decrease. The studies showed that private sector pension plans were usually integrated with social security, whereas, state government plans typically used an "add on" approach and paid pension benefits without regard to social security amounts. The studies also showed that few private sector employers require employees to contribute toward the cost of their pension plan benefits, while most state government pension plans require employee contributions.

Capital accumulation plans are generally supplements to basic pension plans. A wide variety of capital accumulation plans exist, including employee stock-ownership plans, profit-sharing plans, thrift (savings) plans, and deferred compensation plans. Some employers sponsor more than one type of plan.

Thrift plans are the most prevalent kind of capital accumulation plans in the private sector. Using such plans, employers help employees save for retirement and other needs by matching some portion of the employees' contributions to the plan. According to the studies of private sector plans, the most common arrangement provided for the employer to match 50 percent of employee contributions to the plan. Employee contributions of up to 6 percent of pay were subject to employer matching in most plans. By contrast, capital accumulation plans in state retirement programs generally do not provide for a matching employer contribution.

Our calculation of the average benefit amounts covered employees could receive from each element of the nonfederal retirement programs studied was based on the assumption that employees retired on January 1, 1983. Because benefit amounts are related to salary levels, we developed salary histories resulting in final year earnings of \$10,000, \$20,000, \$30,000, \$40,000, and \$50,000 in order to illustrate benefit levels in the plans. The salary histories were developed based on changes in national average earnings between 1953 and 1982, as published by the Social Security Administration. We then determined for illustration the benefits that would be paid to employees retiring at those salary levels at six different age and service combinations:

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Age 65 and 30 years of service.  
Age 65 and 20 years of service.  
Age 62 and 30 years of service.  
Age 62 and 20 years of service.  
Age 55 and 30 years of service.  
Age 55 and 10 years of service.

In calculating social security benefit amounts, we followed the formulas prescribed by the Social Security Act. In making these calculations, we assumed that the employees had no earnings before or after the job from which they were retiring.

To calculate plan benefits, we used all plans that based benefits on a percent of final average salary except for the plans in Hay Associate's study. (The Hay Associates study did not identify the plan formulas, so we contracted with Hay to provide the benefit amounts.) We also included 42 states whose employees were covered by social security and based benefits on final salary. The number of plans we used from each data source and the benefit levels we calculated are shown in appendix II.

We did not attempt to identify the specific thrift plan, if any, sponsored by each employer included in the studies. Rather, for illustration purposes, we calculated the sums that would be available at time of retirement under the typical plan found in the private sector (50 percent employer match of employee contributions of up to 6 percent of pay). In calculating the sums, we assumed the plan earned a rate of return on investments of 7.5 percent over the employee's period of employment. This is the same rate guaranteed on series EE government bonds when held for 5 years. In recognition of the variability of interest rates, we also calculated the sums that would be available using a rate 1.5 percentage points above and below the 7.5 percent rate to illustrate the effect of different interest rates on benefit levels.

We converted the available sums from the thrift plans at retirement to annual annuity amounts using actuarial factors from the 1983 Group Annuity Mortality Tables for males ages 55, 62, and 65 and a 7.5 percent discount rate. Annuity amounts for females at the same ages would be approximately 8 percent, 11 percent, and 12.5 percent less, respectively, than for males. Moreover, the annuities for both sexes, if "purchased" from a financial institution or insurance company might cost somewhat more than the sums we calculated due to administrative expenses and profit margins.

#### SOCIAL SECURITY BENEFITS

The basic element of virtually all nonfederal retirement programs is social security. As shown in the following schedule,

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social security replaces a much higher percentage of final salary for low-wage earners than for those at the higher salary levels.

<u>Social Security Benefit Levels</u>					
	<u>Percent of final salary</u>				
	<u>\$10,000</u>	<u>\$20,000</u>	<u>\$30,000</u>	<u>\$40,000</u>	<u>\$50,000</u>
Age 65, 30 years' service	51.4	40.2	28.2	21.2	17.0
Age 65, 20 years' service	46.1	35.4	26.6	20.0	16.0
Age 62, 30 years' service	38.4	29.6	20.9	15.7	12.6
Age 62, 20 years' service	32.0	24.0	17.8	13.5	10.8
Age 55, 30 years' service*	36.2	27.0	19.4	14.6	11.7
Age 55, 10 years' service*	20.0	14.6	11.1	8.4	6.7
*Available at age 62 based upon earnings through age 55					

PENSION PLAN BENEFITS

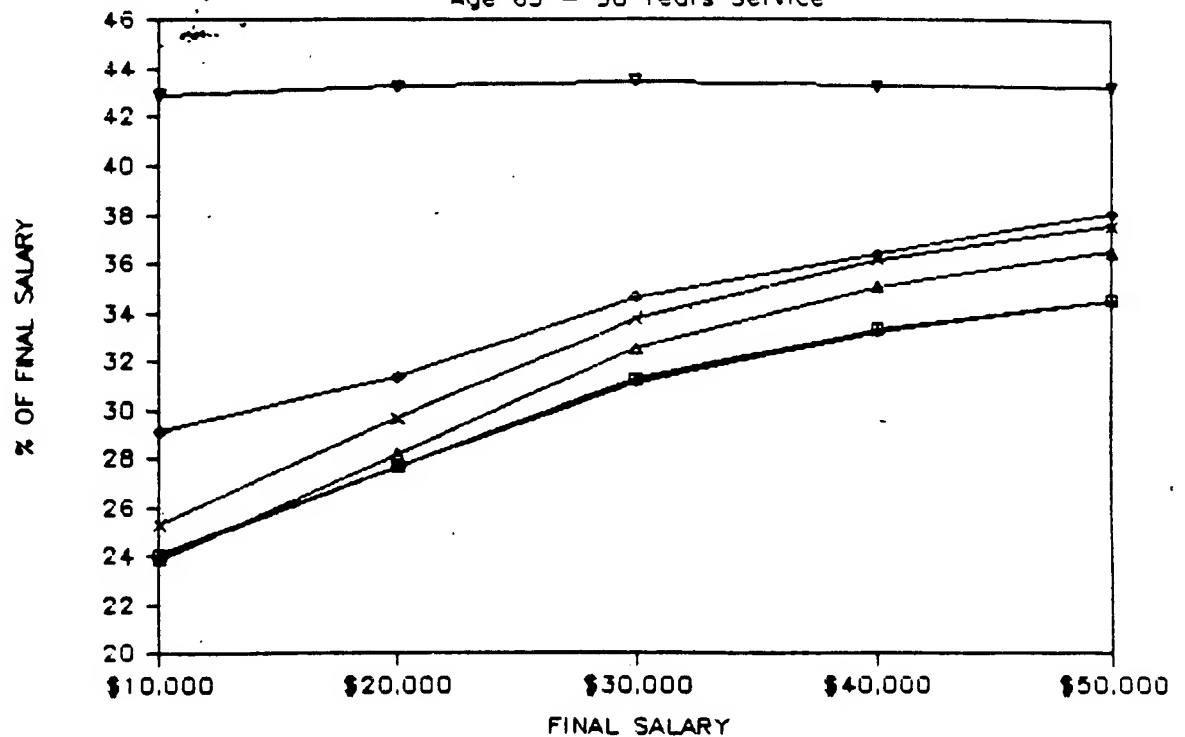
The second element common to most nonfederal retirement programs is a pension plan. There was little difference in the average benefit available to retirees at age 65 and age 62 when years of service and salary levels were the same. Our analysis also showed state government pension plans provide higher average benefits in almost all instances because unlike most private sector plans, they do not require reductions to recognize social security benefits. Details on benefit levels on which the following graphs are based are shown in appendix II.

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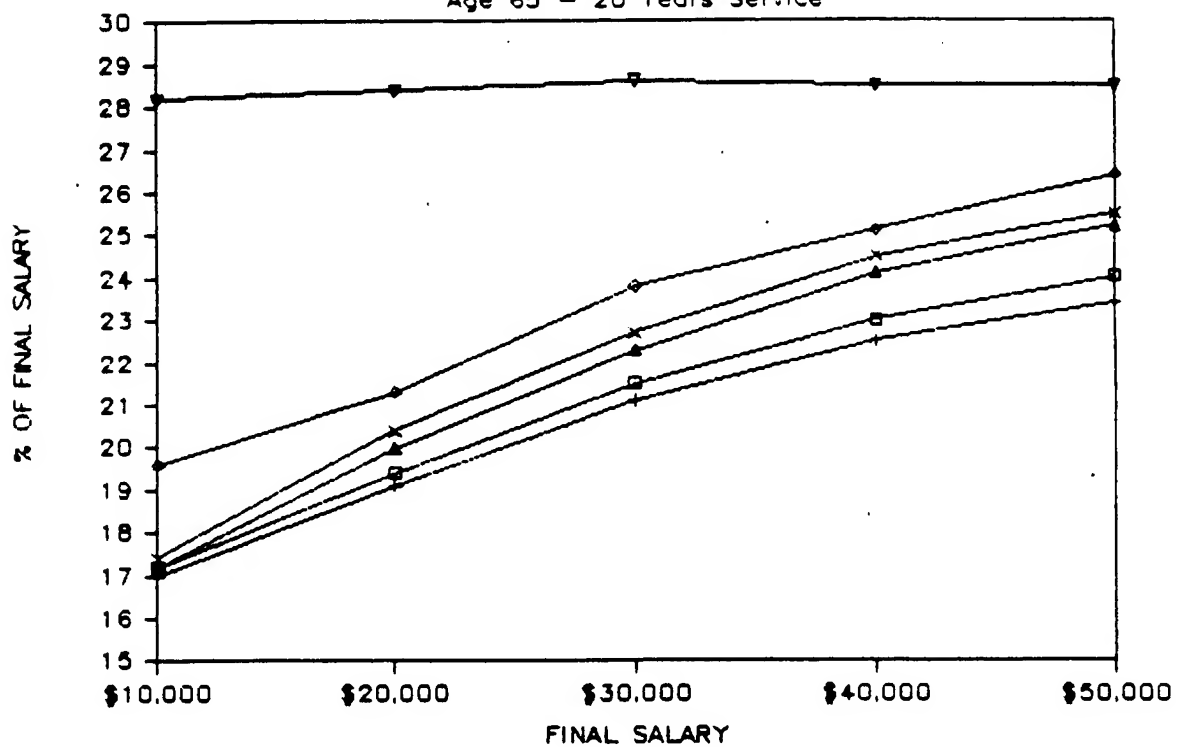
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## PLAN BENEFIT AS % OF FINAL SALARY

Age 65 - 30 Years' Service



Age 65 - 20 Years' Service



□ BLS Plans  
 + Bankers Trust Plans  
 ◇ Hay Plans

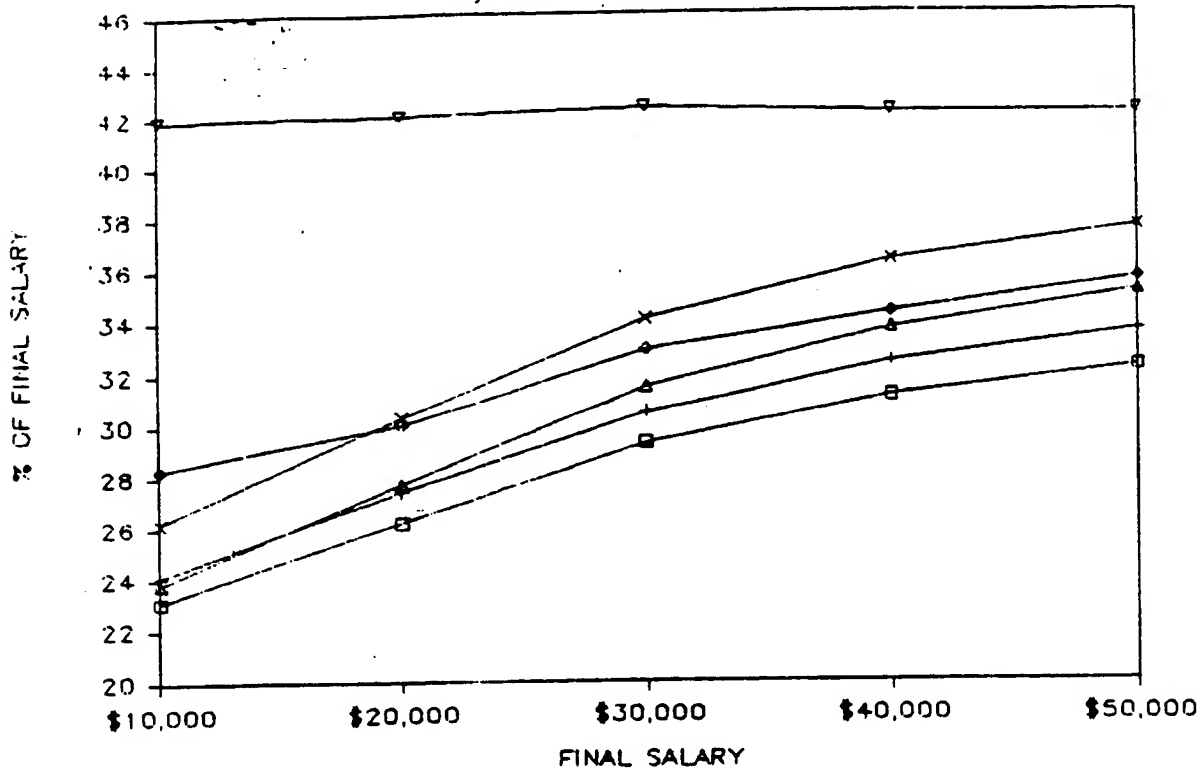
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 X Wyatt Plans  
 ▽ State Plans

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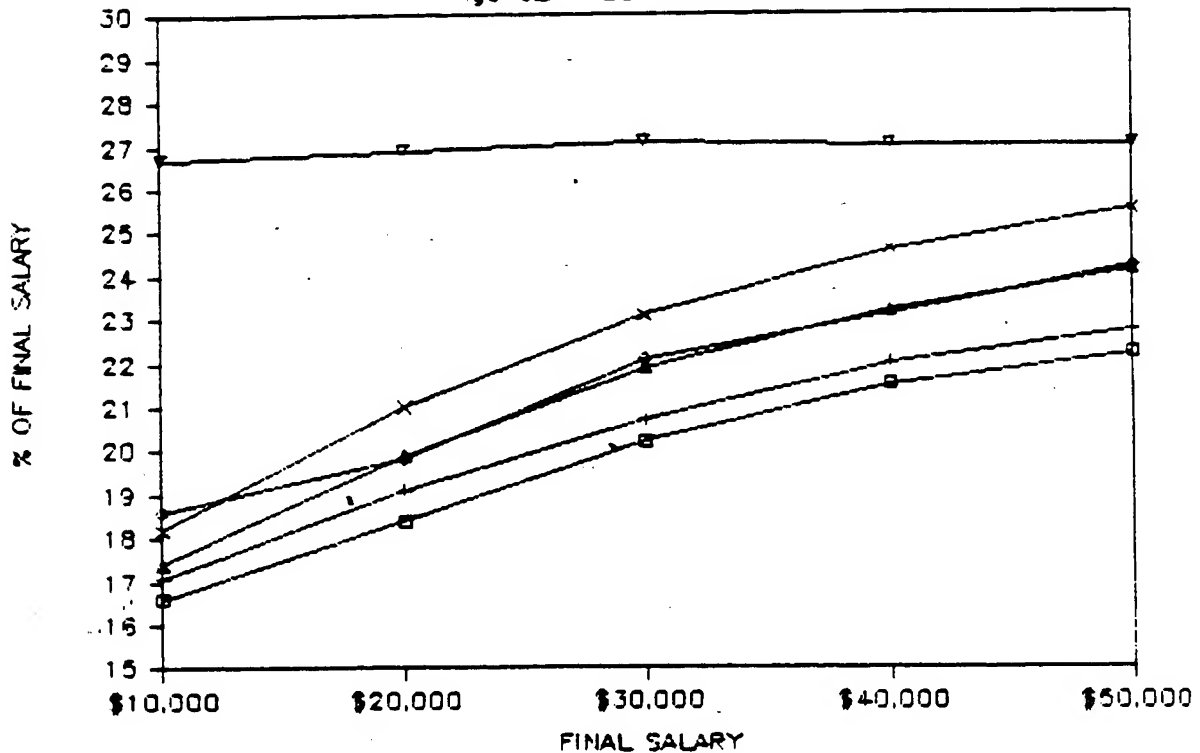
## APPENDIX I

## PLAN BENEFIT AS % OF FINAL SALARY

Age 62 - 30 Years' Service



Age 62 - 20 Years' Service



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 + Bankers Trust Plans  
 ◇ Hay Plans

△ Hewitt Plans  
 X Wyatt Plans  
 ▽ State Plans

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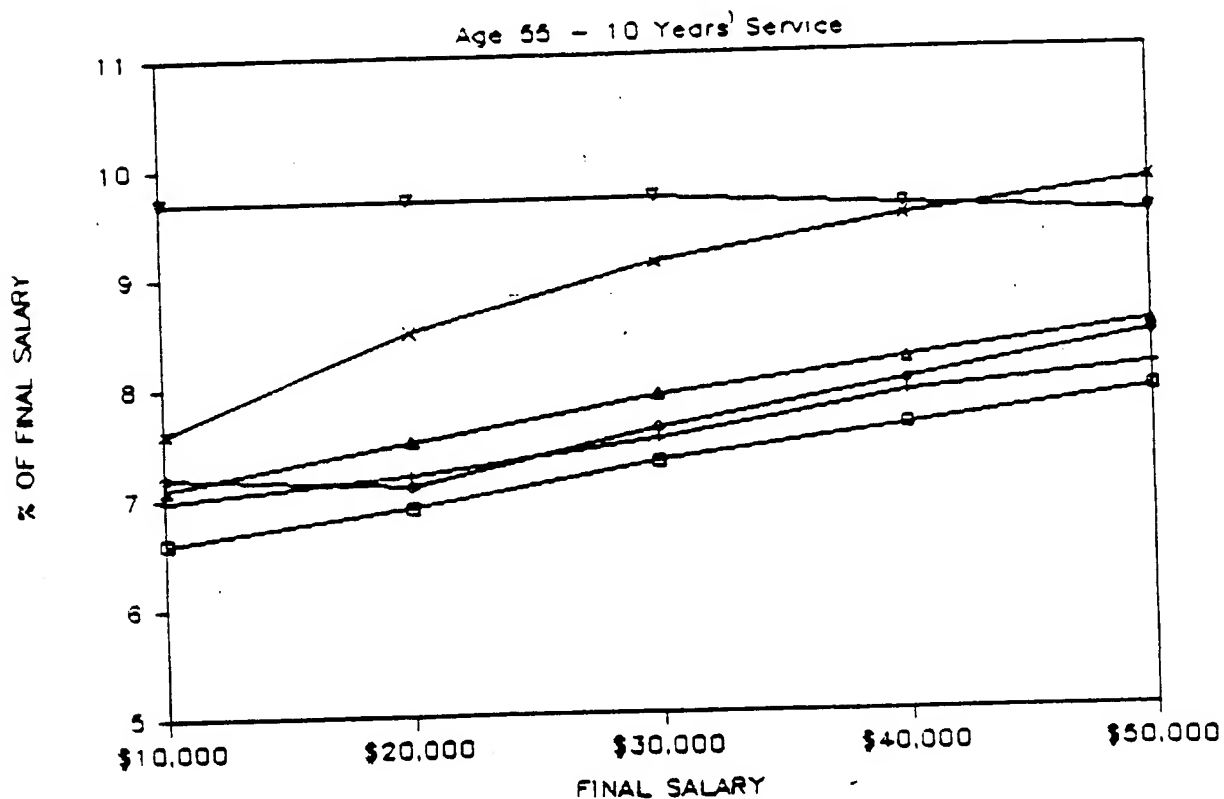
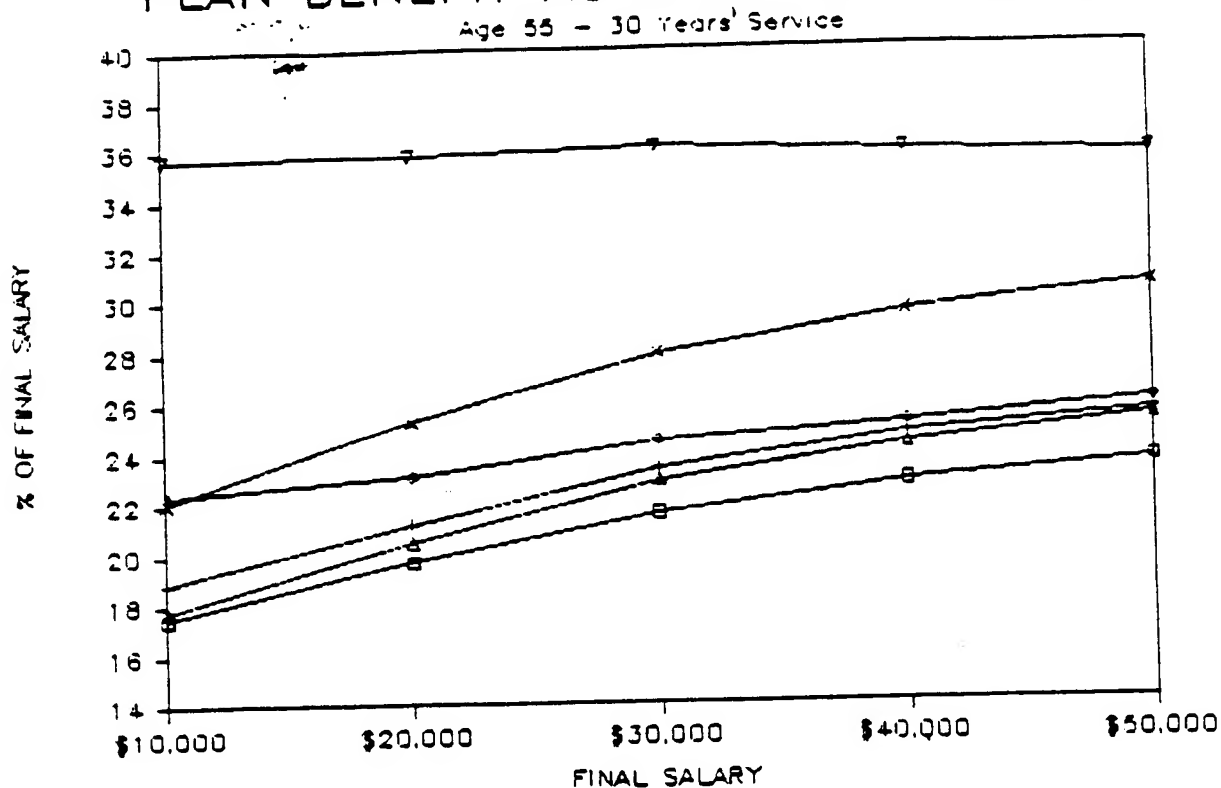
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The graphs on the following page show benefits at age 55 with 30 years' service and 10 years' service, the earliest age when retirement benefits are generally available.

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## PLAN BENEFIT AS % OF FINAL SALARY



□ BLS Plans  
 + Bankers Trust Plans  
 ◇ Hay Plans

△ Hewitt Plans  
 X Wyatt Plans  
 ▽ State Plans

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We found that the average private pension plan benefits for employees retiring at age 55 with 30 years of service ranged from 72 to 84 percent of the benefits they would have received at age 62 with the same service and salary. Similarly, in state government plans, the age 55 benefits were, on the average, 85 percent of the benefit amounts at age 62. The following schedule shows the above analysis.

<u>Sources</u>	<u>Percent Of Age 62 Benefits</u> <u>Available At Age 55</u> <u>(30 years' service)</u>				
	<u>Final salary</u>				
	<u>\$10,000</u>	<u>\$20,000</u>	<u>\$30,000</u>	<u>\$40,000</u>	<u>\$50,000</u>
BLS	76	75	74	75	73
Bankers Trust	78	77	77	76	76
Hay	79	77	74	73	73
Hewitt	75	74	73	72	72
Wyatt	84	83	82	81	81
States	85	85	85	85	85

THRIFT PLANS

While most thrift plans in the private sector provided for employer matching of at least 50 percent of employee contributions up to 6 percent of pay, surveys<sup>2</sup> have shown that employees often contribute (participate) at a lower level. Therefore, to illustrate the potential benefits available from these plans, we calculated benefits at both half participation (3 percent employee contribution) and at full participation. We also computed the benefit levels assuming a 6.0, 7.5, and 9.0 percent rate of return on investments to recognize the variability of interest rates.

The benefits from these plans vary by the number of years of participation and age at retirement. The schedule on p. 11 shows

<sup>2</sup>Salaried Employee Benefits Provided by Major U.S. Employers in 1983, Hewitt Associates; and 1984 Survey of Flexible Compensation Practices of Nearly 800 U.S. Employees, Massachusetts Mutual Life Insurance Company.



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the benefit levels available to male retirees at varying retirement ages and years of service.

<u>Thrift Plan</u> <u>Benefit Levels</u> <u>3% Employee Contribution*</u>			
<u>Interest</u> <u>rate</u>	<u>30 years of service</u>		
	<u>Age 55</u>	<u>Age 62</u>	<u>Age 65</u>
6.0	11.1	12.9	14.1
7.5	16.0	18.3	19.7
9.0	23.0	25.8	27.6
	<u>20 years of service</u>		
6.0	7.0	8.2	8.9
7.5	9.3	10.6	11.4
9.0	12.2	13.7	14.7
	<u>10 years of service</u>		
6.0	3.6	4.2	4.6
7.5	4.5	5.1	5.5
9.0	5.4	6.1	6.5
*Benefit levels at a 6 percent employee contribution rate are double these amounts.			

BENEFIT LEVELS FROM  
TOTAL RETIREMENT PROGRAM

To show the total retirement benefits available to private sector employees, we combined benefits from social security, pension plan, and a capital accumulation (thrift) plan. For retirees in state programs, we combined only social security and pension plan benefits because states generally did not match employee contributions and we have no data on levels of employee participation. Because employees do not always participate at the full amount matched by employers, benefits from the thrift plan are calculated on half participation (3 percent employee

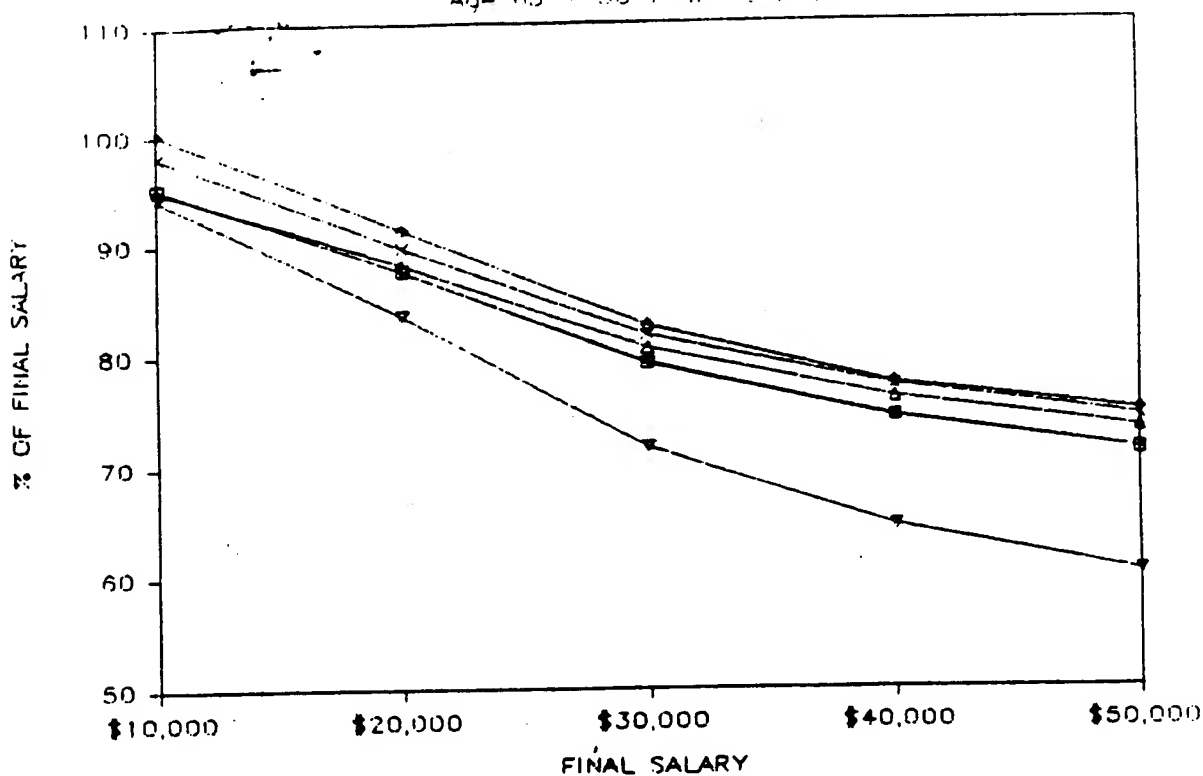
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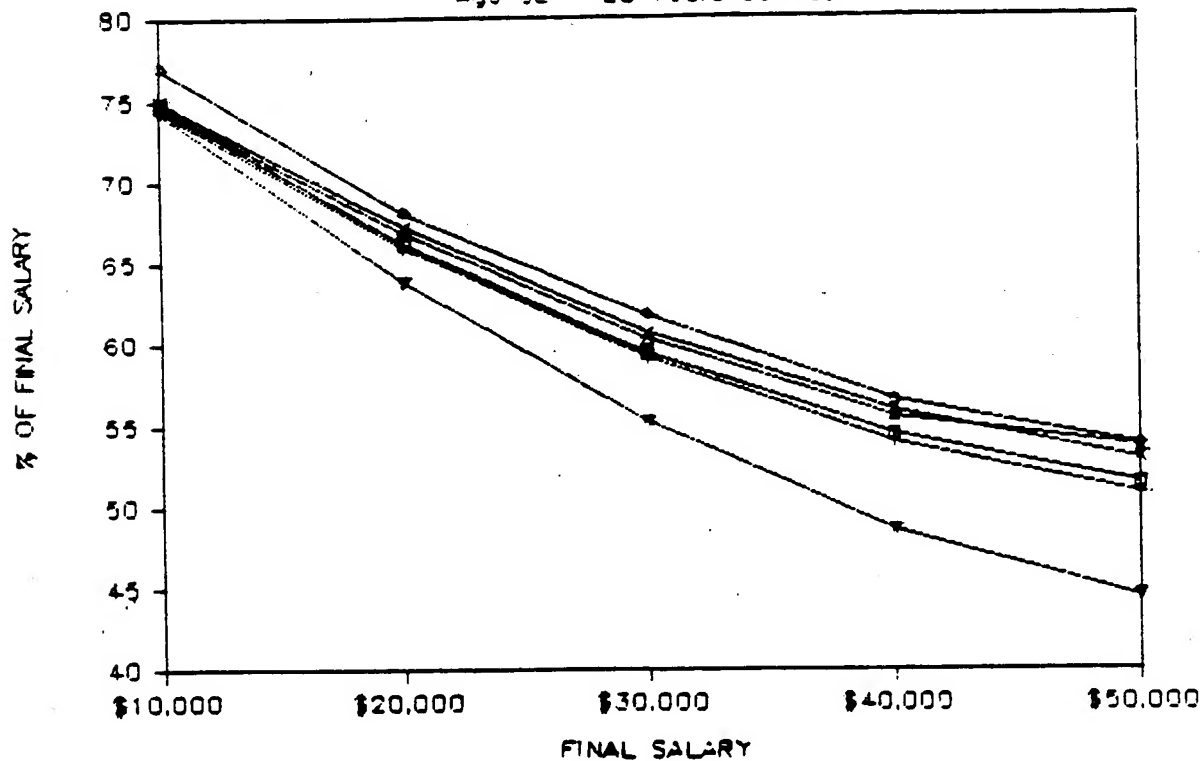
contribution) and 7.5 percent earnings on investments. The graphs on the following pages show total benefits at various retirement ages and years of service. The graphs for age 55 show benefit levels at age 62 when social security becomes available as well as the levels available at age 55 without social security. Details on the levels on which the following graphs are based are shown in appendix III.

# COMBINED BENEFITS AS % OF FINAL SALARY

Age 65 - 30 Years' Service



Age 65 - 20 Years' Service



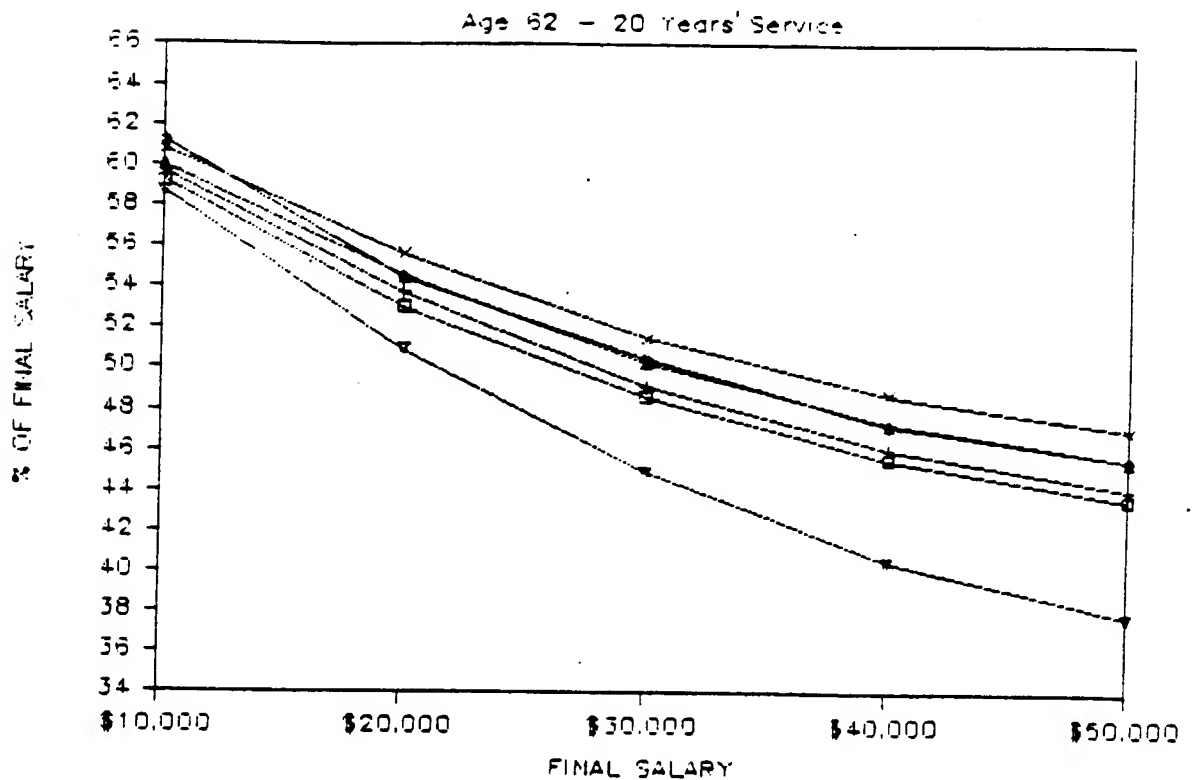
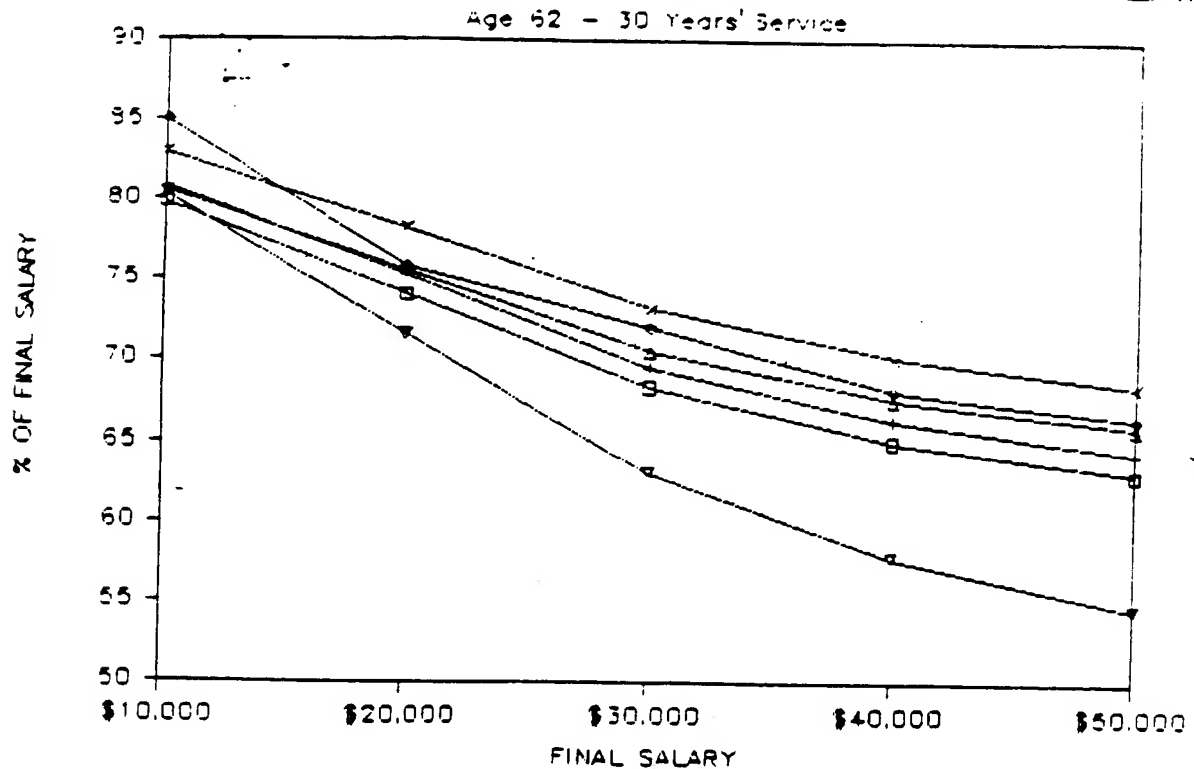
□ BLS Plans  
 + Bankers Trust Plans  
 ◇ Hay Plans

△ Hewitt Plans  
 X Wyatt Plans  
 ▽ State Plans

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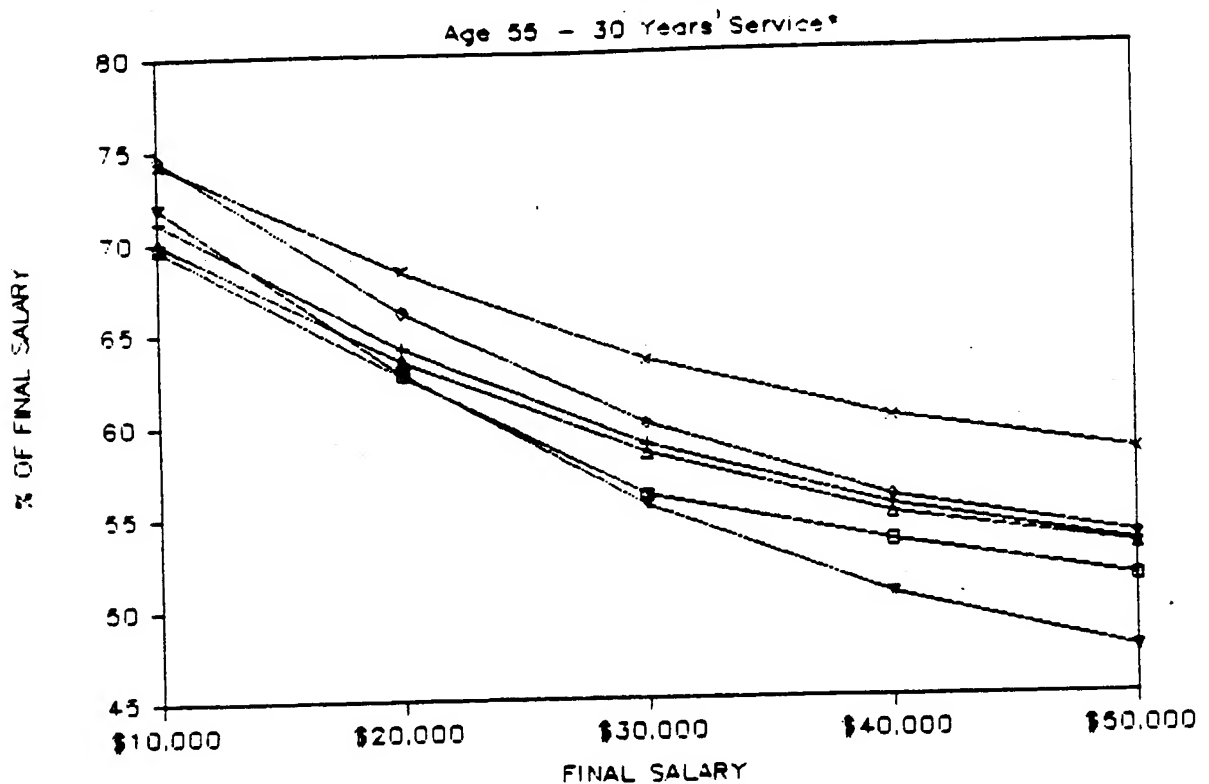
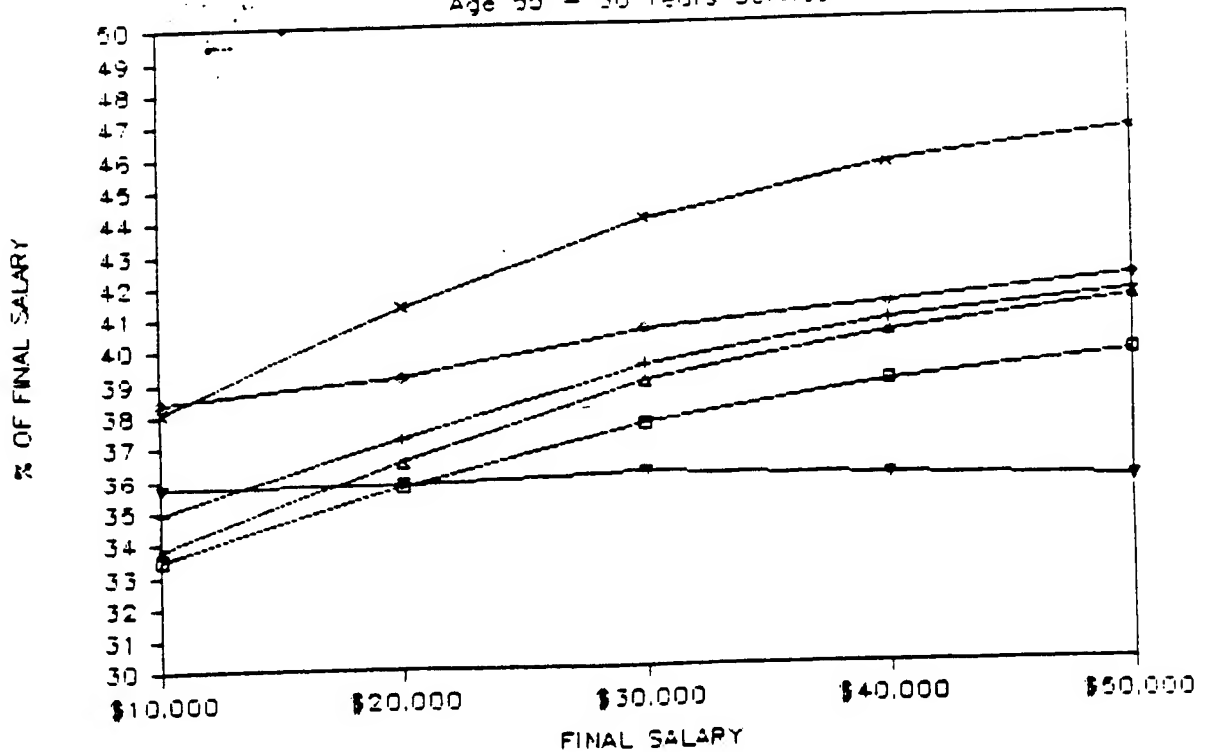
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## COMBINED BENEFITS AS % OF FINAL SALARY



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|-----------------------|----------------|
| □ BLS Plans           | △ Hewitt Plans |
| + Bankers Trust Plans | X Wyatt Plans  |
| ◇ Hay Plans           | ▽ State Plans  |

# COMBINED BENEFITS AS % OF FINAL SALARY Age 55 - 30 Years' Service



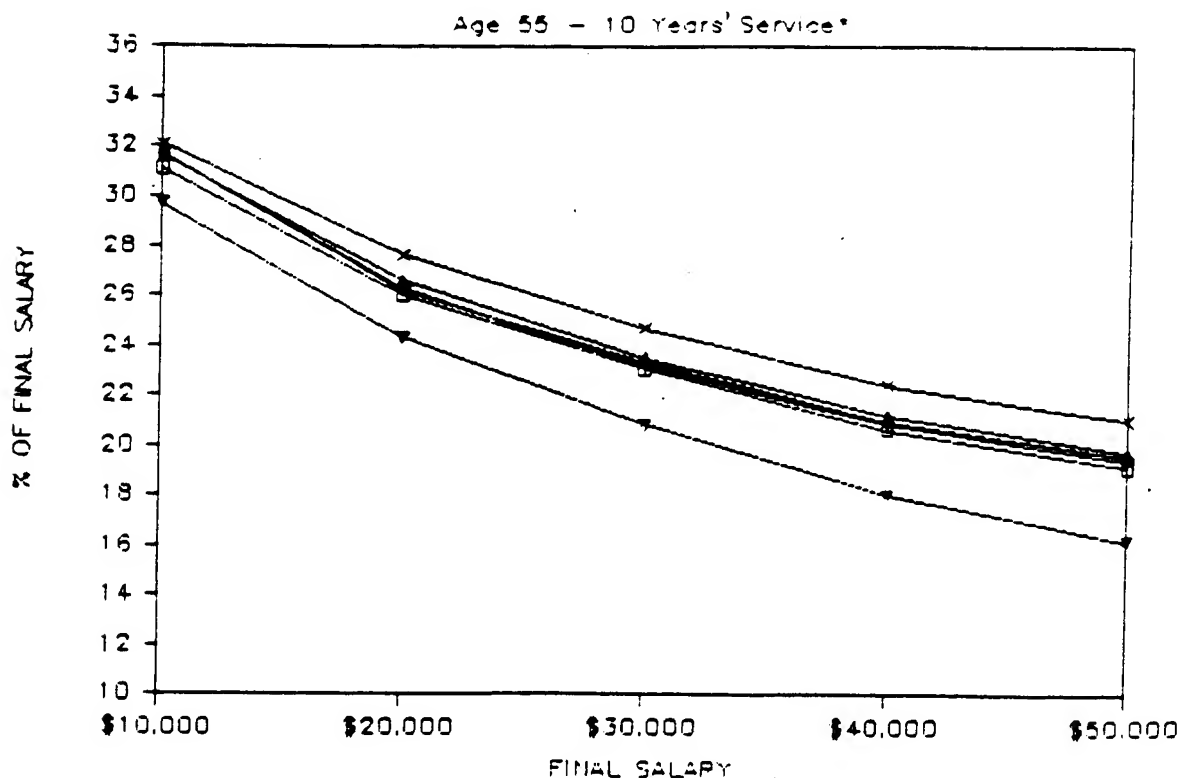
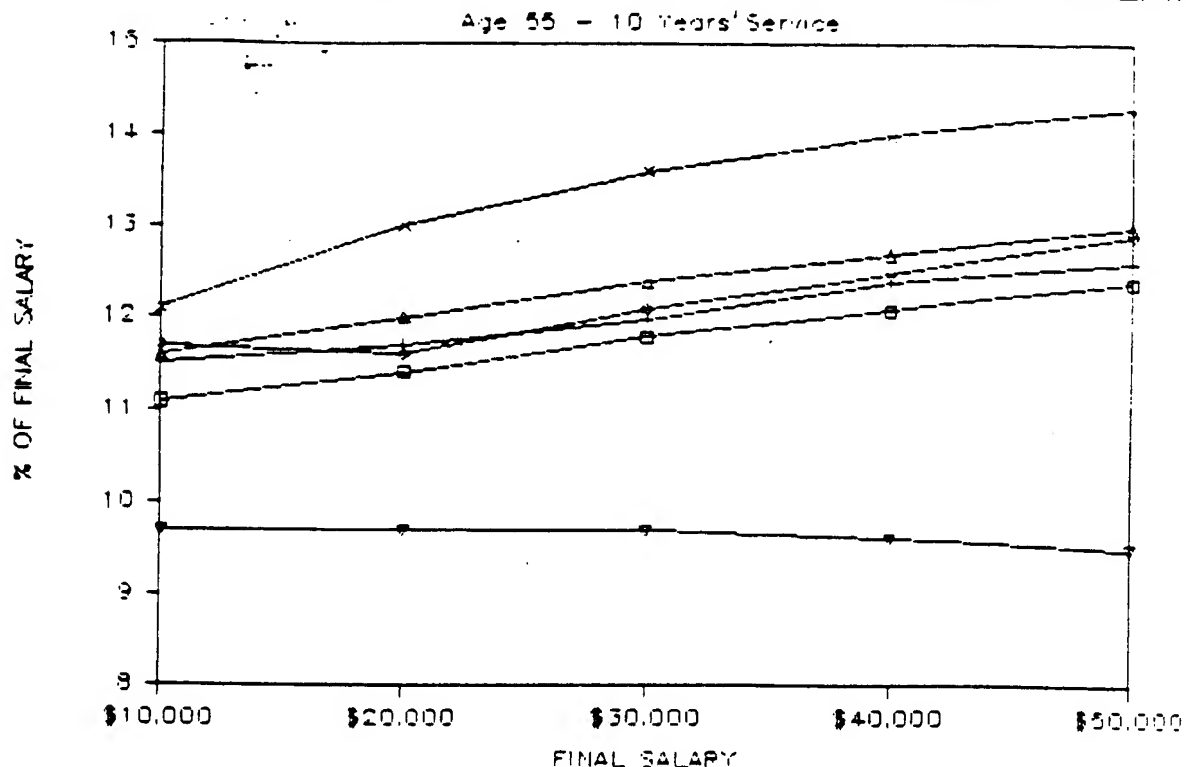
\*Including social security available at age 62.

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|-----------------------|----------------|
| □ BLS Plans           | △ Hewitt Plans |
| + Bankers Trust Plans | X Wyatt Plans  |
| ◇ Hay Plans           | ▽ State Plans  |

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## COMBINED BENEFITS AS % OF FINAL SALARY



\*Including social security available at age 62.

- |                       |                |
|-----------------------|----------------|
| □ BLS Plans           | △ Hewitt Plans |
| + Bankers Trust Plans | X Wyatt Plans  |
| ◇ Hay Plans           | ▽ State Plans  |

## APPENDIX II

## APPENDIX II

AVERAGE PENSION PLAN BENEFIT LEVELSAge 65 - 30 years' service

Final salary	<u>Number of plans</u>	<u>Percent of final salary</u>				
		<u>\$10,000</u>	<u>\$20,000</u>	<u>\$30,000</u>	<u>\$40,000</u>	<u>\$50,000</u>
BLS	477	24.1	27.7	31.3	33.4	34.6
Bankers Trust	186	24.0	27.7	31.2	33.3	34.6
Hay	735	29.1	31.4	34.7	36.4	38.1
Hewitt	510	23.9	28.2	32.6	35.1	36.6
Wyatt	44	25.3	29.7	33.8	36.2	37.6
State	42	42.9	43.3	43.5	43.3	43.3

## APPENDIX II

## APPENDIX II

AVERAGE PENSION PLAN BENEFIT LEVELSAge 65 - 20 years' service

Final salary	<u>Number of plans</u>	<u>Percent of final salary</u>				
		<u>\$10,000</u>	<u>\$20,000</u>	<u>\$30,000</u>	<u>\$40,000</u>	<u>\$50,000</u>
BLS	476	17.2	19.4	21.5	23.0	24.0
Bankers Trust	185	17.0	19.1	21.1	22.5	23.4
Hay	735	19.6	21.3	23.8	25.1	26.4
Hewitt	509	17.2	20.0	22.3	24.1	25.2
Wyatt	43	17.4	20.4	22.7	24.5	25.5
State	42	28.2	28.4	28.6	28.5	28.5



## APPENDIX II

## APPENDIX II

AVERAGE PENSION PLAN BENEFIT LEVELSAge 62 - 30 years' service

Final salary	<u>Number of plans</u>	<u>Percent of final salary</u>				
		<u>\$10,000</u>	<u>\$20,000</u>	<u>\$30,000</u>	<u>\$40,000</u>	<u>\$50,000</u>
BLS	473	23.1	26.2	29.3	31.1	32.2
Bankers Trust	186	24.1	27.4	30.5	32.4	33.6
Hay	735	28.3	30.0	32.9	34.3	35.6
Hewitt	507	23.8	27.7	31.5	33.7	35.1
Wyatt	44	26.2	30.3	34.1	36.3	37.6
State	42	41.9	42.0	42.3	42.1	42.1

## APPENDIX II

## APPENDIX II

AVERAGE PENSION PLAN BENEFIT LEVELSAge 62 - 20 years' service

Final salary	<u>Number of plans</u>	<u>Percent of final salary</u>				
		<u>\$10,000</u>	<u>\$20,000</u>	<u>\$30,000</u>	<u>\$40,000</u>	<u>\$50,000</u>
BLS	467	16.6	18.4	20.2	21.5	22.2
Bankers Trust	182	17.1	19.1	20.7	22.0	22.7
Hay	735	18.6	19.8	22.1	23.1	24.2
Hewitt	502	17.4	19.9	21.9	23.2	24.1
Wyatt	41	18.2	21.0	23.1	24.6	25.5
State	42	26.7	26.9	27.1	27.0	27.0

## APPENDIX II

## APPENDIX II

AVERAGE PENSION PLAN BENEFIT LEVELSAge 55 - 30 years' service

Final salary	<u>Number of plans</u>	<u>Percent of final salary</u>				
		<u>\$10,000</u>	<u>\$20,000</u>	<u>\$30,000</u>	<u>\$40,000</u>	<u>\$50,000</u>
BLS	434	17.5	19.7	21.6	22.8	23.6
Bankers Trust	172	18.9	21.2	23.4	24.7	25.5
Hay	625	22.4	23.1	24.5	25.2	25.9
Hewitt	481	17.8	20.5	22.9	24.3	25.3
Wyatt	44	22.1	25.3	27.9	29.5	30.5
State	40	35.7	35.8	36.1	35.9	35.7

## APPENDIX II

## APPENDIX II

AVERAGE PENSION PLAN BENEFIT LEVELSAge 55 - 10 years' service

Final salary	<u>Number of plans</u>	<u>Percent of final salary</u>				
		\$10,000	\$20,000	\$30,000	\$40,000	\$50,000
BLS	303	6.6	6.9	7.3	7.6	7.9
Bankers Trust	99	7.0	7.2	7.5	7.9	8.1
Hay	442	7.2	7.1	7.6	8.0	8.4
Hewitt	385	7.1	7.5	7.9	8.2	8.5
Wyatt	22	7.6	8.5	9.1	9.5	9.8
State	23	9.7	9.7	9.7	9.6	9.5

COMBINED BENEFIT LEVELS

Age 65 - 30 years' service

	<u>Percent of final salary</u>				
Final salary	\$10,000	\$20,000	\$30,000	\$40,000	\$50,000
<u>BLS</u>					
No participation in thrift	75.5	67.9	59.5	54.6	51.6
Half participation in thrift	95.2	87.6	79.2	74.3	71.3
Full participation in thrift	114.8	107.2	98.8	93.9	90.9
<u>Bankers Trust</u>					
No participation in thrift	75.4	67.9	59.4	54.5	51.6
Half participation in thrift	95.1	87.6	79.1	74.2	71.3
Full participation in thrift	114.7	107.2	98.7	93.8	90.9
<u>Hay</u>					
No participation in thrift	80.5	71.6	62.9	57.6	55.1
Half participation in thrift	100.2	91.3	82.6	77.3	74.8
Full participation in thrift	119.8	110.9	102.2	96.9	94.4
<u>Hewitt</u>					
No participation in thrift	75.3	68.4	60.8	56.3	53.6
Half participation in thrift	95.0	88.1	80.5	76.0	73.3
Full participation in thrift	114.6	107.7	100.1	95.6	92.9
<u>Wyatt</u>					
No participation in thrift	76.7	69.9	62.0	57.4	54.6
Half participation in thrift	96.4	89.6	81.7	77.1	74.3
Full participation in thrift	116.0	109.2	101.3	96.7	93.9
<u>State</u>					
Social security and pension benefits	94.3	83.5	71.7	64.5	60.3

## APPENDIX III

## APPENDIX III

COMBINED BENEFIT LEVELSAge 65 - 20 years' service

Final salary	<u>Percent of final salary</u>				
	\$10,000	\$20,000	\$30,000	\$40,000	\$50,000
<u>BLS</u>					
No participation in thrift	63.3	54.8	48.1	43.0	40.0
Half participation in thrift	74.7	66.2	59.4	54.4	51.4
Full participation in thrift	86.2	77.7	70.9	65.9	62.9
<u>Bankers Trust</u>					
No participation in thrift	63.1	54.5	47.7	42.5	39.4
Half participation in thrift	74.5	65.9	59.1	53.9	50.8
Full participation in thrift	86.0	77.4	70.6	65.4	62.2
<u>Hay</u>					
No participation in thrift	65.7	56.7	50.4	45.1	42.4
Half participation in thrift	77.1	68.1	61.8	56.5	53.8
Full participation in thrift	88.5	79.6	73.3	68.0	65.3
<u>Hewitt</u>					
No participation in thrift	63.3	55.4	48.9	44.1	41.2
Half participation in thrift	74.7	66.8	60.3	55.5	52.6
Full participation in thrift	86.2	78.3	71.8	67.0	64.1
<u>Wyatt</u>					
No participation in thrift	63.6	55.8	49.3	44.5	41.5
Half participation in thrift	75.0	67.2	60.7	55.9	52.9
Full participation in thrift	86.5	78.7	72.2	67.4	64.4
<u>State</u>					
Social security and pension benefits	74.3	63.8	55.2	48.5	44.5

## APPENDIX III

## APPENDIX III

COMBINED BENEFIT LEVELSAge 62 - 30 years' service

Final salary	<u>Percent of final salary</u>				
	\$10,000	\$20,000	\$30,000	\$40,000	\$50,000
<u>BLS</u>					
No participation in thrift	61.5	55.9	50.2	46.8	44.8
Half participation in thrift	79.8	74.2	68.5	65.1	63.1
Full participation in thrift	98.0	92.4	86.7	83.3	81.3
<u>Bankers Trust</u>					
No participation in thrift	62.5	57.0	51.4	48.1	46.2
Half participation in thrift	80.8	75.3	69.7	66.4	64.5
Full participation in thrift	99.0	93.5	87.9	84.6	82.7
<u>Hay</u>					
No participation in thrift	66.7	59.6	53.8	50.0	48.2
Half participation in thrift	85.0	77.9	72.1	68.3	66.5
Full participation in thrift	103.2	96.1	90.3	86.5	84.7
<u>Hewitt</u>					
No participation in thrift	62.2	57.3	52.5	49.4	47.7
Half participation in thrift	80.5	75.6	70.8	67.7	66.0
Full participation in thrift	98.7	93.8	89.0	85.9	84.2
<u>Wyatt</u>					
No participation in thrift	64.6	60.0	55.0	52.0	50.2
Half participation in thrift	82.9	78.3	73.3	70.3	68.5
Full participation in thrift	101.1	96.5	91.5	88.5	86.7
<u>State</u>					
Social security and pension benefits	80.3	71.6	63.2	57.8	54.7

## APPENDIX III

## APPENDIX III

COMBINED BENEFIT LEVELSAge 62 - 20 years' service

	<u>Percent of final salary</u>				
Final salary	\$10,000	\$20,000	\$30,000	\$40,000	\$50,000
<u>BLS</u>					
No participation in thrift	48.6	42.4	38.0	35.0	33.0
Half participation in thrift	59.2	53.0	48.6	45.6	43.6
Full participation in thrift	69.8	63.6	59.2	56.2	54.2
<u>Bankers Trust</u>					
No participation in thrift	49.1	43.1	38.5	35.5	33.5
Half participation in thrift	59.7	53.7	49.1	46.1	44.1
Full participation in thrift	70.3	64.3	59.7	56.7	54.7
<u>Hay</u>					
No participation in thrift	50.6	43.8	39.9	36.6	35.0
Half participation in thrift	61.2	54.4	50.5	47.2	45.6
Full participation in thrift	71.8	65.0	61.1	57.8	56.2
<u>Hewitt</u>					
No participation in thrift	49.4	43.9	39.7	36.7	34.9
Half participation in thrift	60.0	54.5	50.3	47.3	45.5
Full participation in thrift	70.6	65.1	60.9	57.9	56.1
<u>Wyatt</u>					
No participation in thrift	50.2	45.0	40.9	38.1	36.4
Half participation in thrift	60.8	55.6	51.5	48.7	47.0
Full participation in thrift	71.4	66.2	62.1	59.3	57.6
<u>State</u>					
Social security and pension benefits	58.7	50.9	44.9	40.5	37.8



## APPENDIX III

## APPENDIX III

COMBINED BENEFIT LEVELSAge 55 - 30 years' service

Final salary	<u>At age 55</u> Percent of final salary					<u>At age 62</u> Percent of final salary				
	\$10,000	\$20,000	\$30,000	\$40,000	\$50,000	\$10,000	\$20,000	\$30,000	\$40,000	\$50,000
<u>BLS</u>										
No participation in thrift	17.5	19.7	21.6	22.8	23.6	53.7	46.7	41.0	37.4	35.3
Half participation in thrift	33.5	35.7	37.6	38.8	39.6	69.7	62.7	56.0	53.4	51.3
Full participation in thrift	49.5	51.7	53.6	54.8	55.6	85.7	78.7	73.0	69.4	67.3
<u>Bankers Trust</u>										
No participation in thrift	18.9	21.2	23.4	24.7	25.5	55.2	48.2	42.8	39.3	37.2
Half participation in thrift	34.9	37.2	39.4	40.7	41.5	71.2	64.2	58.8	55.3	53.2
Full participation in thrift	50.9	53.2	55.4	56.7	57.5	87.2	80.2	74.8	71.3	69.2
<u>Ray</u>										
No participation in thrift	22.4	23.1	24.5	25.2	25.9	58.6	50.1	43.9	39.8	37.6
Half participation in thrift	38.4	39.1	40.5	41.2	41.9	74.6	66.1	59.9	55.8	53.6
Full participation in thrift	54.4	55.1	56.5	57.2	57.9	90.6	82.1	75.9	71.8	69.6
<u>Hewitt</u>										
No participation in thrift	17.8	20.5	22.9	24.3	25.3	54.0	47.5	42.3	38.9	37.0
Half participation in thrift	33.8	36.5	38.9	40.3	41.3	70.0	63.5	58.3	54.9	53.0
Full participation in thrift	49.8	52.5	54.9	56.3	57.3	86.0	79.5	74.3	70.9	69.0
<u>Watt</u>										
No participation in thrift	22.1	25.3	27.9	29.5	30.5	58.3	52.3	47.3	44.1	42.2
Half participation in thrift	38.1	41.3	43.9	45.5	46.5	74.3	68.3	63.3	60.1	58.2
Full participation in thrift	54.1	57.3	59.9	61.5	62.5	90.3	84.3	79.3	76.1	74.2
<u>State</u>										
Social security and pension benefits	35.7	35.8	36.1	35.9	35.7	71.9	62.8	55.5	50.5	47.4

## APPENDIX III

## APPENDIX III

<u>COMBINED BENEFIT LEVELS</u>										
<u>Age 55 - 10 years' service</u>										
Final salary	<u>At age 55</u>					<u>At age 62</u>				
	<u>Percent of final salary</u>					<u>Percent of final salary</u>				
	\$10,000	\$20,000	\$30,000	\$40,000	\$50,000	\$10,000	\$20,000	\$30,000	\$40,000	\$50,000
<u>BLS</u>										
No participation in thrift	6.6	6.9	7.3	7.6	7.9	26.7	21.5	18.4	16.1	14.6
Half participation in thrift	11.1	11.4	11.8	12.2	12.4	31.2	26.0	22.9	20.6	18.1
Full participation in thrift	15.6	15.9	16.3	16.7	16.9	35.7	30.5	27.4	25.1	22.6
<u>Bankers Trust</u>										
No participation in thrift	7.0	7.2	7.5	7.9	8.1	27.1	21.7	18.7	16.3	14.9
Half participation in thrift	11.5	11.7	12.0	12.4	12.6	31.6	26.2	23.2	20.8	19.4
Full participation in thrift	16.0	16.2	16.5	16.9	17.1	36.1	30.7	27.7	25.3	23.9
<u>Hay</u>										
No participation in thrift	7.2	7.1	7.6	8.0	8.4	27.2	21.7	18.8	16.4	15.1
Half participation in thrift	11.7	11.6	12.1	12.5	12.9	31.7	26.2	23.3	20.9	19.6
Full participation in thrift	16.2	16.1	16.6	17.0	17.4	36.2	30.7	27.8	25.4	24.1
<u>Hewitt</u>										
No participation in thrift	7.1	7.5	7.9	8.2	8.5	27.1	22.1	19.1	16.7	15.2
Half participation in thrift	11.6	12.0	12.4	12.7	13.0	31.6	26.6	23.6	21.2	19.7
Full participation in thrift	16.1	16.5	16.9	17.2	17.5	36.1	31.4	28.1	25.7	24.2
<u>Wyatt</u>										
No participation in thrift	7.6	8.5	9.1	9.5	9.8	27.7	23.1	20.2	17.9	16.5
Half participation in thrift	12.1	13.0	13.6	14.0	14.3	32.2	27.6	24.7	22.9	21.0
Full participation in thrift	16.6	17.5	18.1	18.5	18.8	36.7	32.1	29.2	26.9	25.5
<u>State</u>										
Social security and pension benefits	9.7	9.7	9.7	9.6	9.5	29.7	24.3	20.9	19.0	16.2

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